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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,300	03/24/2004	Fumiaki Usui	CFA00065US	6504

34904 7590 09/21/2007  
CANON U.S.A. INC. INTELLECTUAL PROPERTY DIVISION  
15975 ALTON PARKWAY  
IRVINE, CA 92618-3731

EXAMINER	
ABDIN, SHAHEDA A	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
09/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/809,300

Applicant(s)

USUI ET AL.

Examiner

Shaheda A. Abdin

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-21 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-21 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Response to Amendment**

1. The amendment filed on 07/03/2007 has been entered and considered by examiner.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US Patent No: 5644375) in view of Tateki (JP 09-181340).

(1) Regarding claim 19:

Suzuki et al. (in Fig. 3.) discloses an optical transmission device comprising:

a light-emitting element (LED 31) for converting an electronic signal to an optical signal (column 4, lines 19-27 );

a first light-receiving photo detector (53) for signal detection for converting a received optical signal to an electronic signal (column 5, lines 34-41);

at least two other light-receiving photo detector (37 and 16) for position detection (column 4, lines 39-54) for detecting a receiving position of a luminous flux emitted from

Art Unit: 2629

an other light-emitting element from an opposed partner device (E) (column 4, lines 23-36) , wherein each of the other light-receiving photo detectors (37 and 16) are separate and independent from the first light- receiving photo detector (53) (note that in Fig. 3, the first light receiving photodetector 53 is separated and independent from the other photo detectors 37 and 16);

a mirror (12) to an optical axis of the luminous fluxes emitted from the other light-emitting element from the opposed partner device (E) with an optical axis of the luminous fluxes emitted from said light-emitting element (31) of said optical transmission device in accordance with a detected position by the at least two other light-receiving photo detectors (37 and 16) for position detection (column 4, lines 19-36),

Note that Suzuki teaches the two other light receiving photodetector for position detection but does not teach each photodetector including a plurality of light receiving element elements separated by a separating band having a width  $L$  and shifted a distance  $D$  which is greater than the width  $L$  of of said separating band with respect to a plane perpendicular to the optical axis of the optical transmission device and a mirror which is adjustable.

However, Tateki in the same field of endeavor teaches a plurality (four Quadrisectioned section 22a, Fig. 8) of light receiving elements (illustrated in Fig. 25 and Fig. 34 ) separated by a separating band having a width  $L$  and shifted a distance  $D$  which is greater than the width  $L$  of of said separating band with respect to a plane perpendicular to the optical axis of the optical transmission device (note that since the alignment of the optical is adjustable therefore any kind of shifting distance is

Art Unit: 2629

possible (e.g.  $D > L$ ), also see [0008-0010], [0022-0026]) and a mirror (mirror 4a, Fig. 32) which is adjustable ([0007]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the method of plurality of light receiving elements and a adjustable mirror as taught by Tateki into the optical transmission system of Suzuki so that said at least two other light-receiving photo detectors (37 and 16) can be arranged to receive positions and the at least two light-receiving photo detectors can be shifted a distance  $D$  which is greater than the width  $L$  of of said separating band with respect to a plane perpendicular to the optical axis of the optical transmission device and a adjustable mirror to align to an optical axis. In this configuration the system would perform a high speed response with a high capacity optical communication.

(2) Regarding claim 20:

Suzuki teaches the limitation of other light-receiving photo detectors and Tateki teaches light-receiving photo detectors includes four light receiving elements separated by the separating band ([0002] and fig. 25).

(3) Regarding claim 21:

Suzuki teaches the at least two other light receiving photodetectors (37 and 16) (column 4, lines 39-54) and Tateki teaches the limitation of a diameter of a light receiving spot is smaller than the width  $L$  of the separating band ([0026-0027], Fig. 9).

(24) Regarding claim 24:

Art Unit: 2629

Tateki teaches the relationship  $1.2 \times L < D < 10 \times L$  is satisfied (note that intensity distribution is adjustable and  $D$  is larger than  $L$  therefore, the relationship  $1.2 \times L < D < 10 \times L$  is satisfied (also see [0008-0010], [0022-0028]).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 19-21, 24 have been considered but are moot in view of the new ground(s) of rejection.

In view of amendment, the references Suzuki et al. (US-5644375), is added for the new ground of rejection.

### **Conclusion**

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2629

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Inquiry**

5. Any inquiry concerning this communication should be directed to the examiner at (571) 270-1673 Monday- Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen, can be reached at (571) 272-7772.

Information regarding the status on an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9799 (IN USA OR CANADA) or 571-272-1000.

**Any response to this action should be mailed to:**

Commissioner of patents and trademarks

Washington, D.C. 20231

Or fax to:

(703)872-9314 (for Technology Center 2600 only)

Application/Control Number: 10/809,300


Page 7

Art Unit: 2629

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09/11/2007

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CHANH D. NGUYEN  
SUPERVISORY PATENT EXAMINER